

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 10/743,539

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original) A print control method in which input image data wherein colors are rendered by the combinations of a plurality of color component values is acquired and transformed into output image data wherein colors are rendered by the combinations of gradation values corresponding to ink colors used in a printing device when print operation is performed, the method comprising:

a step for referring to a previously stored profile and generating a color conversion table for transforming a specific color in said input image data into output image data wherein colors are rendered only by color components of the specific color; and a step for carrying out color conversion referring to the color conversion table, with respect to colors rendered only by the color components of the specific color in said input image data, and performing print operation.

2. (original) A print control method in which image data wherein colors at the pixels constituting an image are rendered by color component values in a first color space is acquired and transformed into image data wherein colors at the pixels are rendered by the color

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 10/743,539

component values of inks in various colors used in a printing device and the printing device is controlled when print operation is performed, the method comprising:

a step for storing beforehand on a predetermined storage medium a first profile wherein the combinations of color component values in the first color space are in correspondence with the combinations of color component values in a second color space composed of non-equipment-dependent color components and a second profile wherein the combinations of color component values in a third color space composed of the ink color components of said printing device are in correspondence with the combinations of color component values in said second color space;

a step for bringing a color rendered only by a specific color component value in said first color space and a color rendered only by a specific color component value in said third color space into correspondence with each other in the second color space, referring to said first profile and second profile, and generating a color conversion table which defines the correspondence between the color component values in the first color space which render the color and the color component values in the third color space which render the color;

a step for converting colors rendered only by the specific color component value in said acquired image data into colors rendered only by the specific color component value in the third color space, referring to the color conversion table; and

a step for performing print operation based on the image data which underwent the color conversion.

3. (original) The print control method according to Claim 2, wherein at least one color of the color components in said first color space and at least one color of the color components in the third color space are specific colors in the same family, and the colors rendered only by said specific color component value are the specific colors.

4. (original) The print control method according to Claim 3, wherein said specific colors are black.

5. (original) The print control method according to Claim 2, comprising: a step for extracting a plurality of colors rendered only by a specific color component value from both said first profile and second profile; a step for carrying out interpolation, referring to colors calculated from either profile, to increase the number of colors rendered only by the specific color component value; a step for, if the colors increased in number and a plurality of said colors calculated from the other profile are within a predetermined color difference in the second color space, taking them as the same color and combining them to thereby establish the correspondence in said second color space; and a step for defining the correspondence between

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 10/743,539

color component values in the first color space and color component values in the third color space over the whole range of value of the specific color component by interpolation referring to the sets brought into correspondence.

6. (original) The print control method according to Claim 5, wherein in said interpolation, a curve wherein said sets brought into correspondence are taken as reference points is calculated and points on the curve are taken as interpolating points.

7. (original) The print control method according to Claim 2, wherein a plurality of profiles can be stored, and specified profiles are referred to as said first profile and second profile when said image data is printed.

8. (original) The print control method according to Claim 2, wherein said third color space contains a plurality of color components corresponding to a plurality of ink colors different in density, the method comprising a step for generating a color conversion table wherein a color rendered only by a specific color component value in the third color space is rendered by a plurality of color component values corresponding to a plurality of said ink colors different in density.

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 10/743,539

9. (currently amended) A print controller comprising:

an image data acquiring unit that which acquires input image data wherein colors are rendered by the combinations of a plurality of color component values and transforms the input image data into output image data wherein colors are rendered by the combinations of gradation values corresponding to ink colors used in a printing device when print operation is performed;

;wherein

referring to a previously stored profile, a color conversion table generating unit that generates, by referring to a previously stored profile, a color conversion table for transforming a specific color in said input image data into output image data wherein colors are rendered only by color components of the specific color ~~is generated~~; and

a color conversion unit that converts ~~with respect to~~ the colors rendered only by the color components of the specific color in said input image data, ~~color conversion is carried out, by~~ referring to the color conversion table, when print operation is performed.

10. (original) A print controller which controls a printing device which performs print operation utilizing inks in a plurality of colors, the print controller comprising:

an image data acquiring unit which acquires image data wherein colors at the pixels constituting an image are rendered by color component values in a first color space;

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 10/743,539

a first profile storing unit which stores first profiles wherein the combinations of color component values in the first color space and the combinations of color component values in a second color space composed of non-equipment-dependent color components are in correspondence with each other;

a second profile storing unit which stores second profiles wherein the combinations of color component values in a third color space composed of the ink color components of said printing device and the combinations of color component values in said second color space are in correspondence with each other;

a color conversion table generating unit which brings a color rendered only by a specific color component value in said first color space and a color rendered only by a specific color component value in said third color space into correspondence with each other in the second color space, referring to said first profile and second profile, and generates a color conversion table which defines the correspondence between the color component value in the first color space which indicates this color and the color component value in the third color space which indicates this color;

a color conversion unit which converts a color rendered only by a specific color component value in said acquired image data into a color rendered only by a specific color component value in the third color space, referring to said color conversion table; and

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 10/743,539

a print operation performing unit which performs print operation based on the image data which underwent the color conversion.

11. (currently amended) A computer-readable medium ~~with storing~~ a print control program ~~recorded thereon~~ for acquiring input image data wherein colors are rendered by the combinations of a plurality of color component values, and transforming the input image data into output image data wherein colors are rendered by the combinations of gradation values corresponding to ink colors used in a printing device when print operation is performed, wherein the program causes a computer to carry out:

a function of generating a color conversion table for converting a specific color in said input image data into output image data wherein colors are rendered only by color components of the specific color, referring to a previously stored profile; and carrying out color conversion referring to the color conversion table with respect to colors rendered only by color components of the specific color in said input image data when print operation is performed.

12. (currently amended) A computer-readable medium ~~with storing~~ a print control program ~~recorded thereon~~ for acquiring image data wherein colors at the pixels constituting an image are rendered by color component values in a first color space and transforming the image data into image data wherein colors at the pixels are rendered by the color component values of

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 10/743,539

inks in various colors used in a printing device to control the printing device when print operation is performed, wherein the program causes a computer to carry out:

a function of storing on a predetermined storage medium a first profile wherein the combinations of color component values in the first color space and the combinations of color component values in a second color space composed of non-equipment-dependent color components are in correspondence with each other and a second profile wherein the combinations of color component values in a third color space composed of the ink color components of said printing device and the combinations of color component values in said second color space are in correspondence with each other;

a color conversion table generating function of bringing a color rendered only by a specific color component value in said first color space and a color rendered only by a specific color component value in said third color space into correspondence with each other in a second color space, referring to said first profile and second profile, and generating a color conversion table which defines the correspondence between the color component value in the first color space which indicates this color and the color component value in the third color space which indicates this color;

a color conversion function of converting a color rendered only by a specific color component value in said acquired image data into a color rendered only by a color component value in the third color space, referring to the color conversion table; and

Amendment under 37 C.F.R. § 1.111
U.S. Application No.: 10/743,539

a print operation performing function of performing print operation based on the image data which underwent the color conversion.